chief provincial
VETERINARIAN'S REPORT

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BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)

- BSE is a degenerative disease of the brain and spinal cord of cattle, associated with the accumulation in the brain of abnormal proteins, called prions.
- The greatest risk for the spread of BSE is providing cattle with feed contaminated with prions. To prevent such spread, a ruminant-to-ruminant feed ban has been in place in Canada, since August 1997.
- The occurrence of variant Creutzfeldt-Jakob Disease (vCJD) in humans is associated with consuming BSE-contaminated beef products.
- BSE is a reportable disease under Canada's *Health of Animals Act*.
- Alberta participates in Canada's BSE surveillance program by testing high-risk cattle. These include, cattle of all ages showing signs consistent with BSE, as well as, cattle over 30 months of age that are showing nervous signs, are condemned in provincially-licensed abattoirs, dead stock over 30 months of age, and cattle presented for emergency slaughter. From 1996 to the end of 2003, Alberta Agriculture, Food and Rural Development (AAFRD) tested 2,603 cattle for BSE. All but one was negative for the disease.
- BSE was detected in May 2003 in a cow presented for slaughter at an Alberta-licensed abattoir. The carcass was condemned because it was unfit for human consumption. It did not enter the human food chain.
- Over 2,700 animals were depopulated in the effort to trace and eradicate the source of the disease. Over 2,000 were tested for BSE and found negative.
- As a precautionary measure, in August 2003, the Alberta Government implemented the Health Canada ban on specified risk materials (SRMs) in all provincially licensed abattoirs and meat processing plants. SRMs are tissues that contain infectivity in BSE-infected cattle. Federal abattoirs also remove SRMs.
- The Government of Alberta has renovated its laboratory space, purchased automated equipment for BSE rapid testing and has trained staff. The construction of a level III laboratory, designed for handling BSE material, has been started.
- Due to Canada's first case of BSE, all of our trading partners banned the importation of Canadian cattle and beef products.
- In December 2003, a case of BSE was diagnosed in dairy cow in Washington State, USA. Traceback efforts and DNA testing has shown that the cow was born on a dairy farm in Alberta.
- The Canadian Food Inspection Agency (CFIA) depopulated the remaining 12 animals still alive in Canada, that were born within a twelve-month window of the infected animal, in case they were exposed to the same feed.
- The Canadian Government has announced enhancements to Canada's BSE surveillance and animal identification and tracking measures. In addition, a temporary ban on slaughtering downer animals (those which cannot stand or walk without assistance) in all federal establishments registered for export to the United States was implemented in January 2004.
- Currently, only whole muscle cuts are allowed into the US. No one is certain when live cattle will be eligible for trade into the US, or to the rest of the world.

Alberta
AGRICULTURE, FOOD AND RURAL DEVELOPMENT

- The risk to consumers from BSE-contaminated Canadian beef continues to be immeasurably small.
- Further information about BSE can be found on the Canadian Food Inspection Agency (CFIA) website at: http://www.inspection.gc.ca/english/anima/heasan/disemala/bseesb/bseesbindexe.shtml

WEST NILE VIRUS (WNV)

- WNV is a mosquito-borne virus that potentially causes inflammation of the brain and spinal cord in horses, birds and humans.
- Mosquitoes acquire the virus by feeding on infected wild birds, which are the primary reservoir of WNV. Corvids, such as crows, magpies and blue jays, are very susceptible to WNV and frequently die from the infection.
- WNV is a reportable disease in horses in Alberta. This means anyone knowing of, or suspecting a case of WNV in horses, must report it to the Chief Provincial Veterinarian.
- Alberta's 2003 WNV surveillance program detected the disease in 172 horses, 1,482 birds, 31 mosquito pools and 269 humans. There were 59 horses that died or were euthanized due to complications of the disease.
- A vaccine, licensed for use in horses, is available from veterinarians.
- The best way to prevent WNV infection is to avoid exposure to mosquitoes. Animals can be housed in screened structures and outdoor activities avoided during dawn and dusk, when mosquitoes are the most active. Using topical insect repellants and/or smudges may also be useful. Reduce potential mosquito breeding sites by eliminating shallow, standing water, cleaning watering troughs weekly and keeping grass levels short around buildings and pastures.
- More information about WNV is available at: http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/cpv4377?opendocument

CHRONIC WASTING DISEASE (CWD)

- CWD is a progressive, fatal, degenerative disease of the brain that affects elk, mule deer and white-tailed deer.
- CWD is associated with the accumulation in the brain of abnormal prion proteins.
- The exact mode of transmission of CWD is not clear, but it is known that CWD can spread from one cervid to another, and that females can pass it to their offspring.
- There is no evidence to suggest that CWD can affect humans.
- Alberta has a mandatory surveillance program that requires heads to be submitted for testing from all farmed cervids (older than one year) that die or are slaughtered.
- Between 1996 and the end of 2003, 19,156 cervid heads were examined by AAFRD for CWD. All have tested negative, except for three cases (two farmed white-tailed deer and one farmed elk) in 2002.
- CWD is a federally reportable disease under the *Health of Animals Act*.
- In addition to information on AAFRD's website, information is available on the CFIA website at: http://www.inspection.gc.ca/english/anima/heasan/disemala/cwdmdc/cwdmdcfse.shtml

AVIAN INFLUENZA

- Avian Influenza (AI) is a highly contagious viral infection that can affect all species of birds. Severe illness and death can occur in domestic poultry flocks.
- Wild birds, especially waterfowl, are the primary reservoirs of the virus, but do not show signs of the disease due to a natural resistance.
- Clinical signs of AI may include: coughing, sneezing, nervous signs, a drop in egg production, purplish-blue colouring of wattles and combs, and depression. Severe mortality can occur in a short period of time.
- AI is commonly transmitted through direct or indirect

contact with migratory waterfowl. The virus is also spread through contact with infected poultry, poultry products, equipment, vehicles, clothing and footwear.

- There are 15 subtypes of AI virus, designated H1 through H15, with many strains in each subtype.
- AI is classified into two categories: low pathogenic and highly pathogenic avian influenza (HPAI), based on the severity of the illness in poultry. Sometimes, low pathogenic AI viruses can mutate into HPAI.
- Only H5 and H7 are known to be highly pathogenic. However, not all H5 and H7 subtypes are highly pathogenic.
- Low pathogenic AI was recently reported in the Northeastern United States, as well as in British Columbia's Fraser Valley.
- Since the beginning of 2004, HPAI has been reported in 10 countries in Southeast Asia. It has been responsible for the deaths and destruction of over 100 million birds.
- In rare instances, HPAI strains may affect humans if they have been in extremely close contact with infected birds, carcasses and droppings. A small handful of humans have become ill or have died in the Southeast Asian HPAI outbreak.
- HPAI has recently been confirmed in Texas and in a small number of flocks in B.C. One human in B.C. experienced a mild illness due to these outbreaks.
- HPAI is a reportable disease in Canada. The Canadian Food Inspection Agency (CFIA) is responsible for disease control under the authority of the *Health of Animals Act.*
- In an outbreak, CFIA policy dictates the establishment of a control area and a surveillance zone around the infected flock. Infected and exposed birds are destroyed and movement restrictions are enforced.
- To limit the risk of an AI outbreak, producers should restrict the access of wild birds to dugouts and ponds used as a drinking source, or that are very close to barns or pens of domestic poultry. AI virus is not likely to spread via wind. If dugout or pond water is used as a drinking source, the water should be chlorinated. Implementation of an adequate biosecurity plan is the most effective means of preventing an incursion of AI.
- Further information about AI and the recent global outbreaks can be found on the Chief Provincial Veterinarian web site: http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/cpv4264

FINDING INFORMATION

Ropin' the Web (AAFRD)

http://www1.agric.gov.ab.ca/app21/rtw/index.jsp

Chief Provincial Veterinarian

http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/cpv4264

Canadian Food Inspection Agency

http://www.inspection.gc.ca/english/toce.shtml

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